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EXAMINER	
JARRETT, SCOTT L	

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/760,339	CHAPPEL ET AL.	
	Examiner	Art Unit	
	Scott L. Jarrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-11,13-24 and 26-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 7-11, 13-24 and 26-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This non-final office action is in response to the applicant Request for Continued Examination filed September 6, 2005 wherein Applicant amended claims 1-5, 7-11, 13-24 and 26-28 and canceled claim 12. Currently claims 1-5, 7-11, 13-24 and 26-28 are pending.

Response to Arguments

2. Applicant's arguments with respect to claim 1-5, 7-11, 13-24 and 26-28 have been considered but are moot in view of the new ground(s) of rejection.

It is noted that the applicant did not challenge the Official Notice(s) cited in the Office Actions dated April 7, 2005 and/or October 28, 2004 therefore those statements as presented are herein after prior art. Specifically it has been established that it was old and well known in the art at the time of the invention that:

- regression analysis is a common and well known technique for determining the relationship between several independent or predictor variables and a dependent or criterion variable and that the degree to which two or more predictors are related to the dependent variable is expressed in the correlation coefficient;

- normal, slope, intercept and correlation coefficient equations are among a plurality of well known regression analysis equations;

- the frequency at which one assesses/determines/analyzes the progress of a project is arbitrary and based on the individual preferences, legal/contractual project

requirements, experiences, project size, scope and duration or any of a plurality other guidelines or schedules and that each project status/progress assessment and analysis provides the project manager (user) with an opportunity to make decisions related to the management of the project's progress, including the balancing of available and utilized resources;

- utilizing a tree data structure to represent documents and other project components wherein nodes (leaves and branches) represent the structure and content of the document or component (e.g. Standardized Generalized Markup Language (SGML), eXtensible Markup Language (XML) and Microsoft's Document Object Model (DOM));

- to collect and analyze the lifecycle (history) of project components, including requirements and other documents, through the use of metrics (number of documents, number of revisions per document/section, number of revisions per person, per time interval and the like) in order to provide information regarding the current status/progress of the component being analyzed;

- representing and using data in structured formats, such as the DOM (tree), requires the ability to transform data into and out of (parsing) the chosen data representation/format before such a representation would be of any practical use; and

- to use of content markup languages for transmitting (exchanging) a wide variety of data on the between/amongst systems.

Title

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Determining the Status of a Project By Performing Regression Analysis of Requirements Document Metrics.

Claim Objections

4. Claim 20 is objected to because of the following informalities: Claim 20 contains an extra word "collect" (Page 7, Line 18). Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 3, Claim 3 recites the limitation "the stability of the project" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "the status ~~stability~~ of the project" for the purposes of examination. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-5, 7-11, 13-24 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Ching-Seh, Software Project Plan Tracking Intelligent Agent (2000) in view of Paul et al., Software Metrics Knowledge and Databases from Project Management (1999) and further in view of Rational User's Guide Version 4.5 (1999).

Regarding Claims 1, 20 and 28 Wu teaches a metric-driven project management system and method for managing the complete software lifecycle wherein project metrics are collected, analyzed, reported on and expert recommendations made (e.g. corrective actions regarding project schedule, resources, and the like) for the purposes of continually monitoring, assessing and managing the progress/status of a project (Abstract, pages iii-iv; "...supports the manager starting from defining criteria for milestones for a software project plan and monitoring/assessing the project progress throughout the Software LifeCycle (SLC).", Page 203, Paragraph 2; "Using software metrics in the software project plan to visualize the current status of the project, control the on-going project, and predict the future of the project", Page 10, Bullet 2).

More specifically Wu teaches a method and system for determining status of a project comprising:

- collecting project data wherein the project data is structured as branches and leaves (tree, hierarchically, outline; work breakdown structure; Page 20, No. 5; IEEE STD 1058-1994, Page 24; Page 30, Bullet 2; Page 204, No. 3; Pages 31, 86, 92-93);

- determining (computing, extracting, computing, estimating, etc.) a plurality of attributes, metrics and measures for a plurality of project documents/files including but not limited to requirements and requirement documents from the project data (leaf, branch, tree, work breakdown structure, outline, etc.) metrics (measures, parameters, values, statistics, etc.; edit frequency for requirements/code/files/designs, edit rate, turmoil, number of requirements/modules completed/total, etc.; Page 10; Page 18, Paragraph 1; Page 64, No. 3; Page 100, No. 3; Page 101; Page 234, No. 3; Table 4.1); and

- determining (computing, estimating, calculating, etc.) at least two project progress (status, phase, cost, effort, time, milestones, earned value, turmoil, etc.) parameters (values, statistics, metrics, measures, etc.; PAMPA II; Page 11, Paragraph 2; Page 77, Paragraph 4; Page 78, Paragraph 1; Pages 109-110, 115, 119-120, 123, 139, 159, 205; "...the Metric Parsers come up with results of software metrics. The metrics of project files are indications of how a software project is going. Then, the Parsers can generate metrics stored in a database and presented with a GUI...", Page 100, Number 3);

- wherein the computing/determining of the project progress parameters, metrics, collected project data and the like are performed over a network (Figures 4.1 – 4.2).

Wu further teaches that the system and method for determining/analyzing the progress/status of a project comprises a plurality of subsystems/modules including but not limited to: configuration management, file gathering, software metrics parsers and GUI, prediction, test management, planning, resources and requirement/change management (Table 4.1).

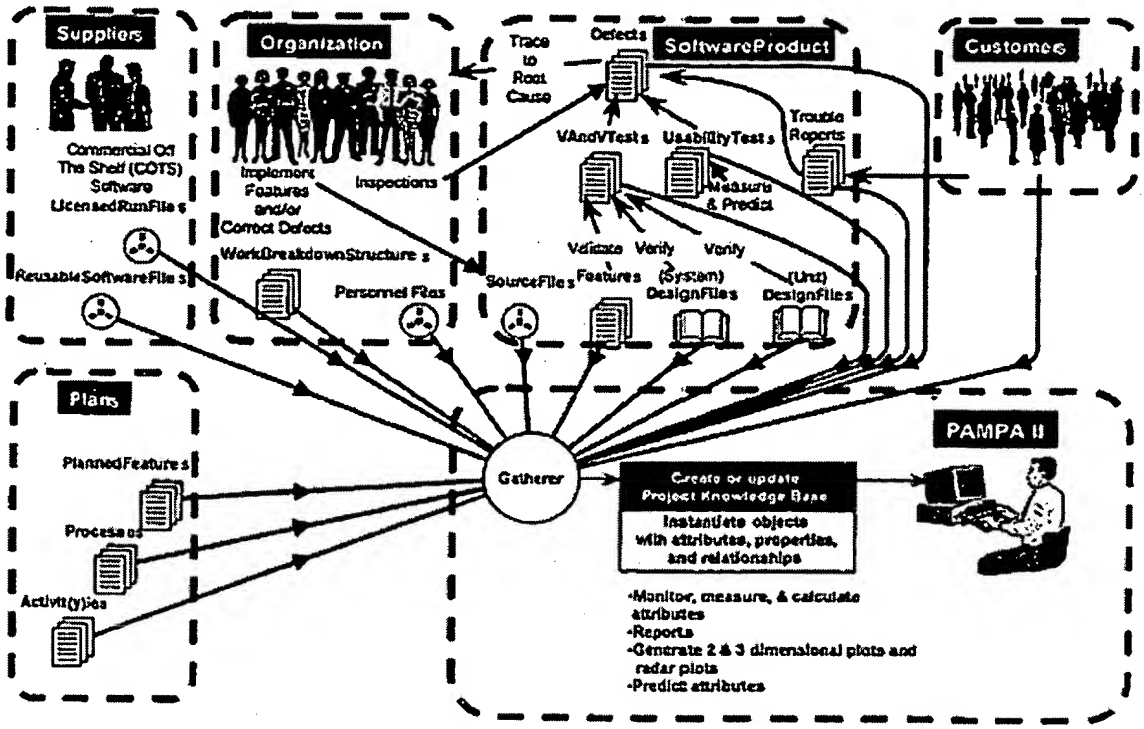

Fig. 4.1. PAMPA II.

Figure 1: Wu, Figure 4.1

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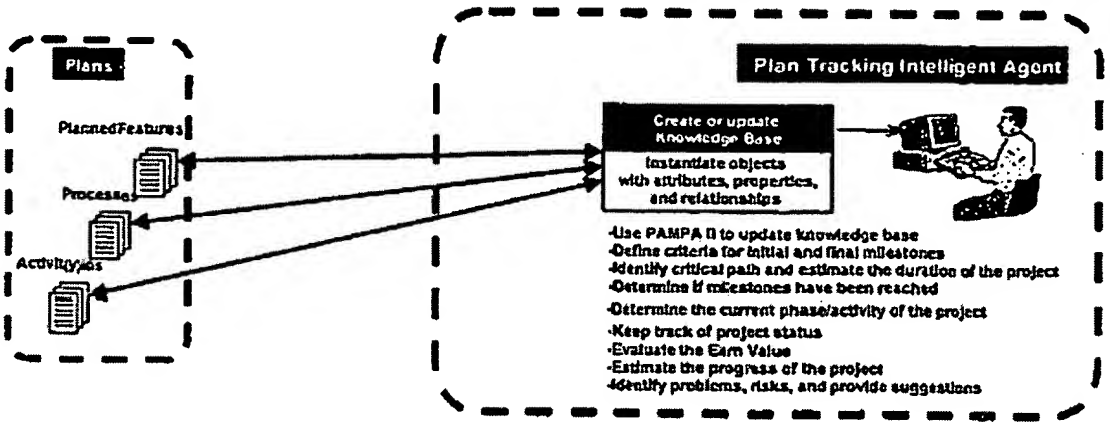

Fig. 5.2. Plan Tracking Intelligent Agent.

Figure 2: Wu, Figure 5.2

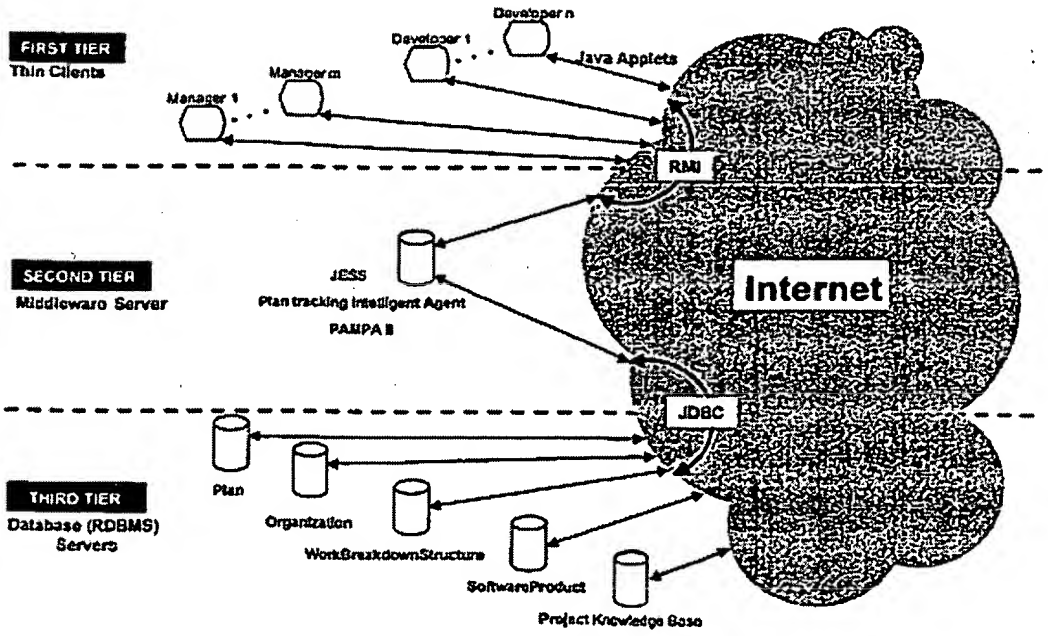

Fig. 4.2. The three-tier architecture of PAMPA II

Figure 3: Wu, Figure 4.2

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TABLE 4.1

Subsystems of the PAMPA II

Subsystems	Primary features
1. Configuration Management System (CMS)	File vision or revision control and source files database. This subsystem is from COTS (Commercial Off The Shelf) and integrated into the PAMPA II.
2. File Gathering	Collect project source files from Configuration Management subsystem.
3. Software Metric Parsers and GUI	Gather metrics and statistics about source files. The results are displayed in the format of : table, 2-D, 3-D, Pie Chart, and Radar Chart.
4. Prediction	Predict effort, cost, time, etc. of the project based on various models.
5. Test Management and Defect Tracking	Provide statistics of the tests, defects and related information for the project.
6. Planning	The manager can choose any SLC model (Waterfall, V, Incremental, Spiral, etc.) to initialize a software project plan. This subsystem also provides Gantt and activity network charts.
7. Group/Personnel Information	Maintains personnel information related to the project for grouping and staffing. (skill, salary, experience, tasks assigned, etc.).
8. Requirements/Changes Tracking	Requirements changes tracking.

Figure 4: Wu, Table 4.1

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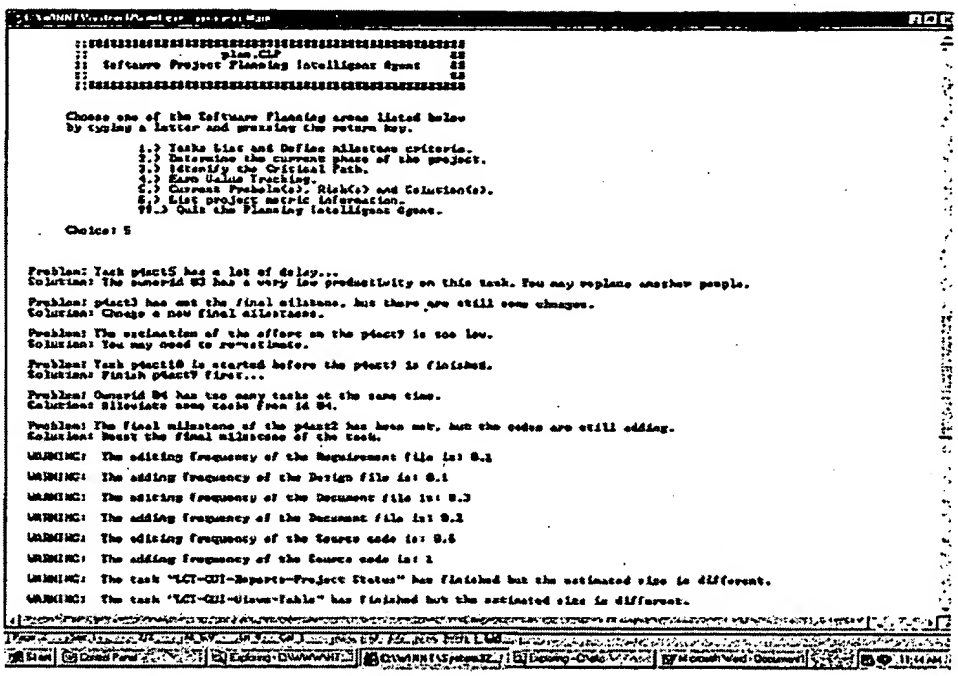

Fig. 5.10. Plan Tracking Intelligent Agent shows the problems and solutions and warning message of the project.

Figure 5: Wu, Figure 5.10

Plan Tracking Intelligent Agent Report (09-08-99)

Earn Value Tracking and Project Progress:

The Current Earn Value is 504 and the project progress is 4.31%.

The Planned Cost is $11700.

The current cost is $576.

4 activities are finished and 19 activities are not finished.

It needs 3 more days to finish System Design phase and 92 days to complete project.

The project is within cost and on schedule.

Fig. 6.7. Earn Value Tracking and Progress Report on 09-08-99.

Figure 6: Wu, Figure 6.7

Plan Tracking Intelligent Agent Report (09-08-99)

Current project attributes and software metrics information:

Project name is: "Personnel Information System"
The current project version is: 1
The estimated size of this project is: 5500 SLOC
The current size of the project: 359 SLOC
The planned cost is: $11700
The current cost spent is: $576
The planned reliability is: 90%
The current reliability is 88%
The planned features are: 39
The current features built are: 0
The estimated usability is: 30
The current usability is: 0
The estimated defects are: 12
The current defects existing are: 2
The estimated number of people for this project is: 5
The current number of people is: 5
The estimated days for this project are: 105 days
The current days spent are: 10 days
The current turmoil is: 91

Fig. 6.9. Software metrics and project attributes information report on 09-08-99.

Figure 7: Wu, Figure 6.9

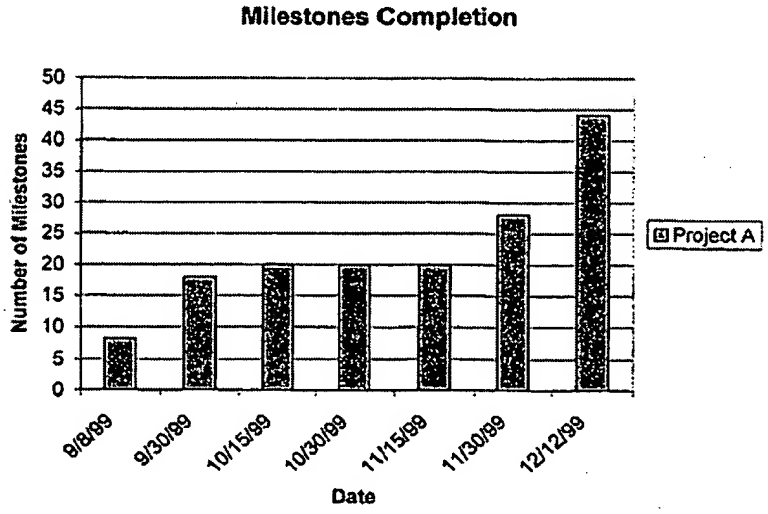

Fig. 6.26. Milestone progress for Project A.

Figure 8: Figure 6.26

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Wu does not expressly teach performing regression analysis on the plurality of project metrics collected and analyzed or that collected project data is a requirements document having branches and leaves as claimed.

Paul et al. teach performing regression analysis on a plurality of collected project metrics collected and analyzed, in an analogous art of project management for the purposes of determining the status/progress of a project through the collection and analysis of a plurality of project metrics and attributes stored in a database (Section 2.1.2 Regression and Principal Component Analysis, Page 260; Figure 3;

- "...we need an approach which can employ modern high-level analytical techniques in conjunction with software metrics database to process the metrics data in order to gain knowledge and detailed insight into the software development process." (Page 255, Column 1, Paragraph 1);

- "...queries can often provide the essential ingredients for the proactive software development project management." (Page 255, Column 2, Paragraph 3);

- "Managers pose queries on the metrics database with the objective of obtaining supplementary information related to the progress of the project, and to reduce project risks." (Page 256, Column 1, Paragraph 2);

"...generating histograms, employing basic statistics, and identifying correlation among metrics to determine interdependencies.", (Page 256, Column 1, Paragraph 4);

- "Management metrics are used to track project costs and schedule, determine project personnel, and computer resources to be allocated to a project." (Page 256, Column 2, Paragraph 4); and

- "Also, requirement metrics can aid project managers to schedule tasks, partition the work, and enforce certain performance standards for the software." (Page 263, Column 1, Paragraph 2)).

More specifically Paul et al. teach a method and system for determining/analyzing the status/progress of a project further comprising:

- the selection, collection, use and computation of a plurality of project metrics and data, including but not limited to project progress metrics, their associated data and personnel/resource requirements (Section 2 - Test & Evaluation Metrics Data; Page 256, Column 1, Paragraphs 1-4; Page 256, Column 2, Paragraphs 2-4; Figures 3-4);

- identifying the correlation/dependencies/relationships amongst a plurality of project metrics utilizing a plurality of well known statistical/analytical techniques, including but not limited to regression analysis and principal component analysis, to (Section 2.1.2 Regression and Principal Component Analysis, Page 260; Figure 3);

- utilizing requirement specifications/documents ("Find the total number of relational requirements documents."; Table 1, Page 258; Column 2, Paragraphs 3-6, Page 256);

- periodically collecting, analyzing, and reporting (visually, graphically) of project progress/metrics (Page 255, Column 2, Paragraph 2; Page 260, Column 1, Paragraph 1; Page 260, Column 2, Paragraph 1; Table 1);

- utilizing metrics to determine/assign resources/manpower (Page 256, Column 2, Paragraph 4; Page 263, Column 1, Paragraph 2);

- determining the progress/status of the project based on the collected and analyzed project attributes and/or metrics (Page 256, Column 2, Paragraph 3; Page 256, Column 1, Paragraphs 1-2;; Page 263, Column 1, Paragraph 2); and

- collecting, analyzing and reporting requirement metrics (e.g. stability, changes, classify and predict changes, etc.; Page 263, Column 1, Paragraph 2; Figures 2, 4).

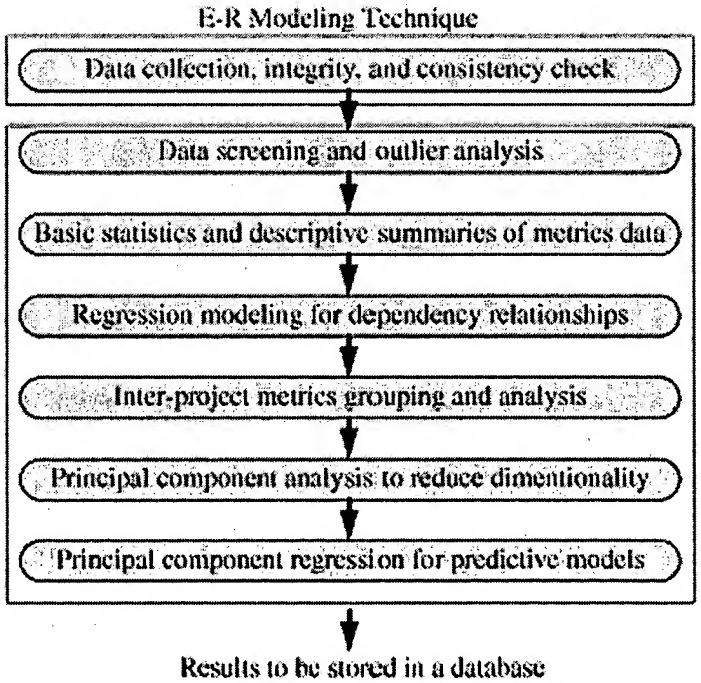

Fig. 3. Collection and analytical processing of T&E metrics data.

Figure 9: Paul et al., Figure 3

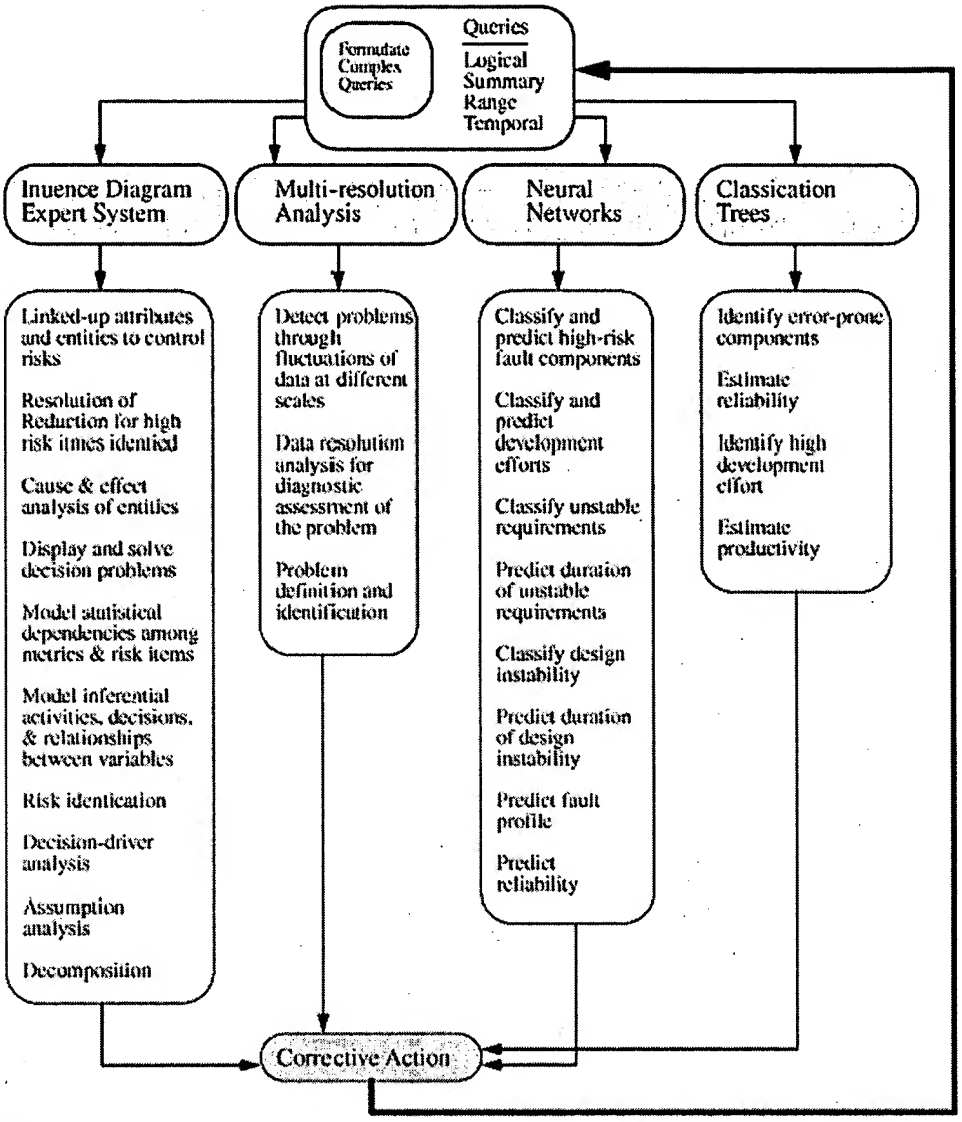

Fig. 4. An integrated environment for decision analysis based on various analytical tools.

Figure 10: Paul et al., Figure 4

It would have been obvious to one skilled in the art at the time of the invention that the system and method for determining the status of a project as taught by Wu would have benefited from utilizing a plurality of well known statistical/analytical techniques for analyzing and reporting on the plurality of collected project metrics in

view of the teachings of Paul et al.; the resultant system enabling users to "employ modern high-level analytical techniques in conjunction with software metrics database to process the metrics data in order to gain knowledge and detailed insight into the software development process." (Paul et al.: Page 255, Column 1, Paragraph 1).

Neither Wu nor Paul et al. expressly teach computing regression parameters and/or coefficients as claimed.

Official notice is taken that it is old and well known in the art that regression analysis to determine the relationship between several independent or predictor variables and a dependent or criterion variable and that the degree to which two or more predictors are related to the dependent variable is expressed in the correlation coefficient.

It would have been obvious to one skilled in the art at the time of the invention that the method and system for analyzing/assessing the progress of a project wherein the system utilizes well known statistical regression analysis techniques to analyze a plurality of collected project data, as taught by the combination of Wu and Paul et al., would have included calculating correlation coefficients in view of the teachings of official notice; the resultant system further assisting project managers with the critical management decisions regarding risk and quality during the life cycle of a software project (Paul et al.: Section 3 – Conclusion, Page 263).

Neither Wu nor Paul et al. expressly teach that the collected project data comprises a requirements document having a tree structure wherein the branches are representative of structure components of a requirements document and the leaves are representative of content components of the requirements document as claimed.

RequisitePro teaches collecting project data wherein the collected data comprises a requirements document having a tree structure wherein the branches are representative of structure components of a requirements document and the leaves are representative of content components of the requirements document ("Traceability Tree", Pages 4-3, 4-7, 10-6; "Branch Level Requirements", Pages 4-3, 4-7, 9-1; Chapter 8: Requirements, Chapter 9: Hierarchical Relationships, Chapter 10: Traceability Relationships), in an analogous art of project management and/or requirements management, for the purposes of managing the scope of a project through the management of a project's requirements (Pages 1-7).

RequisitePro further teaches a requirements management system and method comprising:

- a requirements repository for storing hierarchical requirements and their plurality of attributes and relationships in documents and/or databases (Pages 2-3; Pages 12-1) wherein requirements have a plurality of attributes/properties including priority, status, owner, cost, date-of-birth, child/parent, etc. (Pages 1-11, 2-10);

- an import wizard (subsystem) for extracting (parsing, pulling, collecting, etc.) requirements from a plurality of sources (CSV, Word, databases, etc.; Chapter 11: Import wizard; Pages 11-1, 11-6, 11-7, 11-8);

- an export module for exportint (outputting) requirements into a plurality of formats including but not limited to a plurality of content markup language (e.g. HTML; Pages 11-22, 15-6→15-11);

- requirements version and change control subsystems for managing requirement changes and their impact (requirement versions, change history, baselines, dependencies, traceability etc.; revisions: date, time author, change description, etc. Page 8-10; Pages 1-8, 1-10, 1-12, Pages 2-3; Figure 3);

- generating project summaries and reports including static reports (filters, sorting, etc) and trend analysis reports ("A trend analysis report uses time-sensitive filters that analyze changes in requirement text, attributes, traceability, and hierarchical relationships.", Page 14-5, Bullet 2);

- tracking and reporting a plurality of hierarchical requirements metrics, statistics and attributes including but not limited to: %complete, birth date, revision date, author, etc. ("Requirement metrics provide project managers and product analysts with the capability of reporting statistics RequisitePro requirements text, attributes, relationships and revisions.", Page 14-5, Last Paragraph; Pages 16-15→16-17);

- tracking and reporting on requirement metrics ("Requirement metrics provide project managers and product analysts with the capability of reporting statistics RequisitePro requirements text, attributes, relationships and revisions. These reports

are displayed in Microsoft Excel and can be manipulated with Excel's charting capabilities." Page 14-5, Last Paragraph; export to excel for analysis, charting, etc. Pages 14-5, 14-6); and

- integrating with Microsoft Project for managing project tasks and requirements (Pages 16-1 →16-17) wherein users create/track tasks from requirements, "Analyze the impact on the requirements, tasks, the project and the schedule as changes occur." (Page 16-1, Bullet 5) and capture/monitor a plurality of project metrics such as cost, %complete, resource, or the like. (Pages 16-15 →16-17).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for determining the progress/status of a project utilizing regression analysis of collect project data as taught by the combination of Wu and Paul et al. would have benefited from managing the plurality of requirements in a hierarchically structured *requirements document* in view of the teachings of RequisitePro; the resultant system enabling users to manage the scope of a project through the management of a project's requirements (RequisitePro: Pages 1-7).

Regarding Claims 2 and 21 Wu teaches a method and system for determining/analyzing the progress/status of a project wherein *at least one of* the project parameters (metrics, attributes, etc.) include: total number of branches/leaves (requirements), number of modifications performed on the branches/leaves (documents, requirements, files, etc.), average age of the branches/leaves (requirements,

documents; (edit rate, edit frequency of requirements/documents/code, SLOC, milestones completed/total, revisions, turmoil, rework, activities completed, etc; Pages 114, 121, 150, 257; Figures 5.10, 6.7, 6.9).

Regarding Claims 3 and 22 Wu does not expressly teach utilizing regression analysis to analyze the plurality of collected project metrics as claimed.

Paul et al. teach utilizing regression analysis and/or other well known statistical analysis techniques (approaches, methods, etc.) to analyze and report on the plurality of project metrics as discussed above.

Neither Wu nor Paul et al. expressly teach utilizing *at least one of* the claimed regression equations.

Official notice is taken that the regression equations claimed (normal, slope, intercept and correlation coefficient) are among a plurality of equations and/or approaches commonly used for statistical regression analysis and as such are old and well known.

It would have been obvious to one skilled in the art at the time of the invention that the method and system for analyzing/ the progress of a project, with its utilization of well known regression analysis techniques to gain insight into the progress/progress of

a project based on the plurality of project metrics/statistics, as taught by the Wu and Paul et al. would benefited from using of any of a plurality of well known reression analysis techniques and/or equations, including the equations as claimed, when analyzing the metric data collected in order to provide insight into the progress of a project in view of the teachings of official notice.

Regarding Claims 4 and 23 Wu teaches a method and system for determining/analyzing the progress/status of a project further comprising updating at least one database with data (records, information, etc.) generated from performing statistical analysis of the collected project data (Pages 95-98; Page 98, Paragraph 1; Figure 4.2).

Regarding Claims 5, 10 and 24 Wu teaches a method and system for determining/analyzing the progress/status of a project wherein collecting project data further comprises *at least one of* the following: reading data from a file or database or receiving data across a network (Page 78, Paragraph 1; Pages 80, 99-100; Table 4.1; Figure 4.2).

Regarding Claims 7 and 26 Wu teaches a method and system for determining/analyzing the progress of a project further comprising outputting (displaying, providing, sending, exporting, etc.) the status of the project (Pages 33, 95, 102, 142; Figures 4.5-4.10; 6.1-6.26).

Regarding Claims 8, 19 and 29 Wu teaches a method and system for determining/analyzing the progress/status of a project wherein the project includes *at least one of* the following: a requirements document, specification document, proposal, request for proposal, sales performance document, manufacturing process, accounting system, distribution system or a software development project (Abstract; Pages 88-89, 102, 111, 136; 158; Table 2.4; IEEE STD 1058-1994, Page 24).

Regarding Claim 9 Wu teaches a method and system for analyzing the progress (status) of a project comprising:

- collecting project data wherein the data is hierarchically structured (branches and leaves; work breakdown structure, wbs; Page 20, No. 5; IEEE STD 1058-1994, Page 24; Page 30, Bullet 2; Page 204, No. 3; Pages 31, 86, 92-93);

- parsing the collected data to product information (first data records) summarizing/describing the project (Page 100, No. 3; Page 101; Table 4.1);

- generating (computing, determining, etc.) a plurality of project (documents, files, etc.) metrics and statistical data from the collected project information based on the hierarchically structure files/documents (e.g. leaf and branch) metrics (rework, turmoil, edit rate, edit frequency, changes, revisions, % module increase, # features complete/total, earned value, cost, requirements, etc.; Page 114, No. 8; Pages 121, 150, 257; Figure 5.10, 6.6-6.26);

- computing statistical results indicative of the progress of the project (number milestones, milestone status, project phase, features/modules complete, etc.; Pages 11, 109-110, 115, 119-120, 123, 137, 159; Figures 6.1-6.26); and

- wherein the statistical analysis/computation uses regression analysis to facilitate daily project progress assessments and forecasts resource requirements (Page 29, Step 7; Page 32, Bullet 1; Page 113, No. 7; Page 93; Figure 6.12 "Add resource");

- wherein the steps of collecting, parsing and computing are performed over a computer network (Page 95; Figure 4.2).

Regarding Claim 11 Wu teaches a method and system for determining/analyzing the progress/status of a project wherein the information (records) are stored in a database (Figures 4.1-4.2; Page 98, Paragraph 1).

Regarding Claim 13 Wu teaches a method and system for determining/analyzing the progress/status of a project wherein the statistical results are time dependent (Pages 12, 80, 95; 5.11; Figures 6.1-6.26).

Regarding Claim 14 Wu teaches a method and system for determining/analyzing the progress/status of a project where the statistical results based on the leaf and branch metrics (third data records) have a dependent relation with the project of the

progress (i.e. are indicative of the project's progress; Pages 10-11, 109-110, 115, 119-120, 123, 159).

Regarding Claim 15 Wu teaches a method and system for determining/analyzing the progress/status of a project further comprising at least one of the following the statistical data based on the hierarchical project data (leaf/branch; second data records) or statistical results based on the statistical data based on the project (third data records) graphically (icon, image, chart, graph, picture, report, etc.; gnat chart, pert chart, activity chart, polar/bar/line graphs; Page 95, Paragraph 1; Page 33, Bullet 1; Page 102; Figures 4.1, 4.5-4.9; 6.1-6.26).

Regarding Claim 16 Wu teaches a method and system for determining/analyzing the progress/status of a project wherein the project data are structured as objects (classes, documents, Java an object oriented programming language; Pages 95-98).

Regarding Claim 17 Wu teaches a method and system for determining/analyzing the progress/status of a project wherein the project is formatted according to a content markup language (Internet, web pages, etc; e.g. HTML; Figures 4.2-4.10).

Regarding Claim 18 Wu teaches a method and system for determining/analyzing the progress/status of a project based up the statistical analysis/results of the plurality of project metrics and attributes as discussed above.

Wu does not expressly teach performing regression analysis on the plurality of project metrics collected and analyzed as claimed.

Paul et al. teach performing regression analysis on the plurality of project metrics collected and analyzed, in an analogous art of project management for the purposes of determining the status/progress of a project through the collection and analysis of a plurality of project metrics and attributes stored in a database (Page 255, Column 2, Paragraph 1; Page 256, Column 1, Paragraph 4; Page 257, Column 2, Paragraph 1; Sections 2.1.2-2.1.3; Pages 260-261).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for determining the status of a project as taught by Wu would have benefited from utilizing a plurality of well known statistical/analytical techniques for analyzing and reporting on the plurality of project metrics in view of the teachings of Paul et al.; the resultant system enabling users to "employ modern high-level analytical techniques in conjunction with software metrics database to process the metrics data in order to gain knowledge and detailed insight into the software development process." (Paul et al.: Page 255, Column 1, Paragraph 1).

Neither Wu nor Paul et al. expressly teach computing regression parameters and/or coefficients as claimed.

Official notice is taken that it is old and well known in the art that regression analysis is a technique for determining the relationship between several independent or predictor variables and a dependent or criterion variable and that the degree to which two or more predictors are related to the dependent variable is expressed in the correlation coefficient.

It would have been obvious to one skilled in the art at the time of the invention that the method and system for analyzing and assessing the progress of a project wherein analyzing the metrics was conducted through the use of statistical regression analysis techniques, as taught by the combination of Wu and Paul et al., would have included the calculation of correlation coefficient in view of the teachings of official notice; the resultant further assisting project managers with the critical management decisions regarding risk and quality during the life cycle of a software project (Paul et al.: Section 3 – Conclusion, Page 263).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Stoddard II, Robert William, U.S. Patent No. 5,903,453, teaches a system and method for managing a project wherein project metrics are collected and stored in a tree data structure (hierarchical fashion) and a plurality of metrics are calculated for the nodes (branches, leaves) of the tree.

- Imachi et al., U.S. Patent No. 6,272,678, teach a project management system and method wherein the system utilizes version control, document and configuration management subsystems (modules, etc.) to manage a plurality of hierarchically structured documents.

- D'Anjou et al., U.S. Patent No. 6,336,217, teaches a system and method for tracking the status/project of a project wherein the system comprises a change management module/subsystem to control/track/monitor the changes to project documents/artifacts including but not limited to requirement documents which are arranged/structured hierarchically (tree). Further D'Anjou et al. teach that "By utilizing an established document database management system, such as Notes, built in Notes functions may allow viewing and monitoring of the progress of development and testing efforts." (i.e. determining the status of the project based on document information/measures/metrics).

- Feibus, Andy, Manage your project's requirements (1998) teaches a plurality of commercially available systems and methods for managing project requirements.

Feibus further teaches that several of the tools structure/store requirements as trees (hierarchically) wherein the tree structure enables users to asses such things as requirement traceability, document/requirements changes (change history) as well as enable users to import requirements directly into the tools from external sources (i.e. extract/parse external documents for requirements) and export requirements into standard content markup languages such as HTML, SGML or the like.

- Abbot, Bruce, Requirements set the mark (2001) teaches a plurality of project requirement attributes that can be used in assessing the progress/status of a project.

- Simmons, Dick et al., Software Measurement: A Visualization Toolkit for Project Control and Process Improvement (1997) teaches a system and method for determining the progress of a project utilizing a plurality of automatically collected and analyze metrics including but not limited to effort (time, cost), productivity, reliability, quality and the like (PAMPA). Simmons et al. further teach that the project attributes/metrics can be structured as trees.

- QSS Delivers Industry's First Enterprise-Wide Requirements Management Suite for E-Business (2000) teaches the commercial availability of a system and method for managing project requirements (DOORS).

- TBI.com Web Pages – Caliber Requirements Management (2000) teaches the commercial availability of a system and method for managing project requirements, structured as trees, wherein the system enables users to asses/monitor the progress of the project utilizing document baselines, traceability trees/matrices, threaded

discussions and the like. TBI.com further teaches the system's ability to import/extract requirements from/into a plurality of external sources.

- Espinosa, Mario Alberto Garcia, Intelligent Agents Applied to Software Management (1997) teaches a system and method for managing projects using a project metrics approach wherein an expert system utilizes a plurality of intelligent agents (subsystems, modules, etc) to determine the phase of the project, estimate project effort (time, resources, documentation) and diagnose risks/issues with the project utilizing a plurality of project metrics generated based on a plurality of automatically collected and analyzed project information over a computer network (PAMPA; Abstract; Paragraphs 1-3, Page 2; Paragraph 3, Page 4). Espinosa further teaches that the metric-centric project management approach provides a plurality of benefits including increased visibility of the progress of the project as well as improved tracking and control of the project (Pages 7-8; "With this knowledge, managers will know exactly if the software development process in on schedule or not.", Paragraph 2, Page 11).

- Schultz, H. P., Software Management Metrics (1988) teaches the old and well known collection of project metrics to asses the progress (status) of a project including but not limited to requirements volatility/stability.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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